POWDERED INSECTICIDE APPLICATOR

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Fig. 1

Fig. 2

Fig. 3

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POWERED INSECTICIDE APPLICATOR

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This invention relates to new and useful improvements in powdered insecticide applicators of the hand type and has for its primary object to provide, in a manner as hereinafter set forth, novel means for blowing clouds of insecticide powder over the area to be treated.

Another important object of the present invention is to provide an insecticide applicator or gun of the character described comprising unique means for pneumatically agitating the powder and preventing it from packing.

Other objects of the invention are to provide a powdered insecticide applicator or gun of the aforementioned character which will be comparatively simple in construction, strong, durable, compact, of light weight and which may be manufactured at low cost.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a view in side elevation, partially in section, of a powdered insecticide applicator or gun constructed in accordance with the present invention;

Figure 2 is a top plan view thereof;

Figure 3 is an enlarged view in vertical longitudinal section through the lower portion of the device; and

Figure 4 is a fragmentary view, taken substantially on the line 4—4 of Figure 3.

Referring now to the drawing in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a substantially cylindrical container 5 of suitable material for the reception of an insecticide powder. The container 5 is provided with a removable cover 6 to permit loading. Of course, the container 5 may be of any desired dimensions or capacity.

Fixed in the lower portion of the container 5 is a funnel or hopper 7 which divides said container into an upper powder chamber and a lower air chamber 8. The funnel 7 comprisies an opening 9 in its lower end having mounted therein an air-pervious valve 10 of felt or other suitable material.

Fixed on the lower portion of the container 5 is a hand pump which is designated generally by the reference character 11. The pump 11 comprises a barrel 12 affixed at one end to the container 5 and communicating with the air chamber 8 through an opening or port 13 in said container. The pump 11 further comprises a reciprocating piston 14 which is operable in the barrel 12. Reference character 15 designates a baffle or deflector in the air chamber 8 over the opening or port 13.

Mounted in the lower portion of the container 5 in longitudinal alignment with the pump barrel 12 is an atomizer type discharge nozzle 16. The nozzle 16 traverses the funnel 7 and terminates in a reduced inner end 17 which is in communication with the number 8 for receiving air under pressure therefrom. The nozzle 16 is further provided, in its lower portion, with a powder intake opening 18 communicating with the hopper or funnel 7.

It is thought that the use of the device will be readily apparent from a consideration of the foregoing. Briefly, the container 5 is filled to the desired level with an insecticide powder. Of course, the powder fills the hopper 7. The pump 11 functions as a handle to be gripped in one hand. With the other hand, the operator actuates the pump 11 for forcing air under pressure into the chamber 8 through the opening or port 13. Most of the air enters the nozzle 16 from the chamber 8 through the intake end portion 17 of said nozzle and, rushing past the opening 18, draws the powder from the hopper 7 into said nozzle in an obvious manner. The rest of the air from the pump 11 passes upwardly from the chamber 8 through the porous baffle 10 for agitating the powder and keeping it loose in the hopper 7.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. An insecticide powder gun comprising: a substantially cylindrical container for the reception of the powder, a substantially conical hopper, for the reception of the powder from the container, mounted in the lower portion of said container, said container having in said lower portion thereof a chamber for the reception of air under pressure, a pump mounted on the container and communicating with the chamber for forcing air thereinto, a discharge nozzle mounted horizontally in the lower portion of the container, said nozzle traversing the hopper and having an opening in its lower portion communicating therewith for receiving the powder therefrom, said nozzle including a reduced inner end portion communicating with the chamber for receiving air under pressure therefrom for ejecting the powder from the nozzle, said hopper having an opening therein below the nozzle communicating with the chamber for receiving air therefrom for agitating the powder, and air-pervious valve in the second named opening for controlling the flow of air into the hopper.

2. An insecticide powder gun comprising: a container, a conical powder hopper at an intermediate point in the container dividing said container into an upper chamber for the reception of powder and a lower chamber for the reception of air under pressure, said hopper having an opening therein for the passage of air into said hopper from the lower chamber for agitating the powder, an air-pervious valve in the opening for controlling the flow of the air, a hand pump mounted on the container and communicating with the lower chamber for forcing air thereinto, and an atomizer-type discharge nozzle in the container extending diametrically through said hopper and having a powder intake opening therein communicating with the hopper and aligned with said second named opening, said nozzle communicating at one end with the lower chamber for receiving air therefrom for ejecting the powder.

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